

Representative Images RB case

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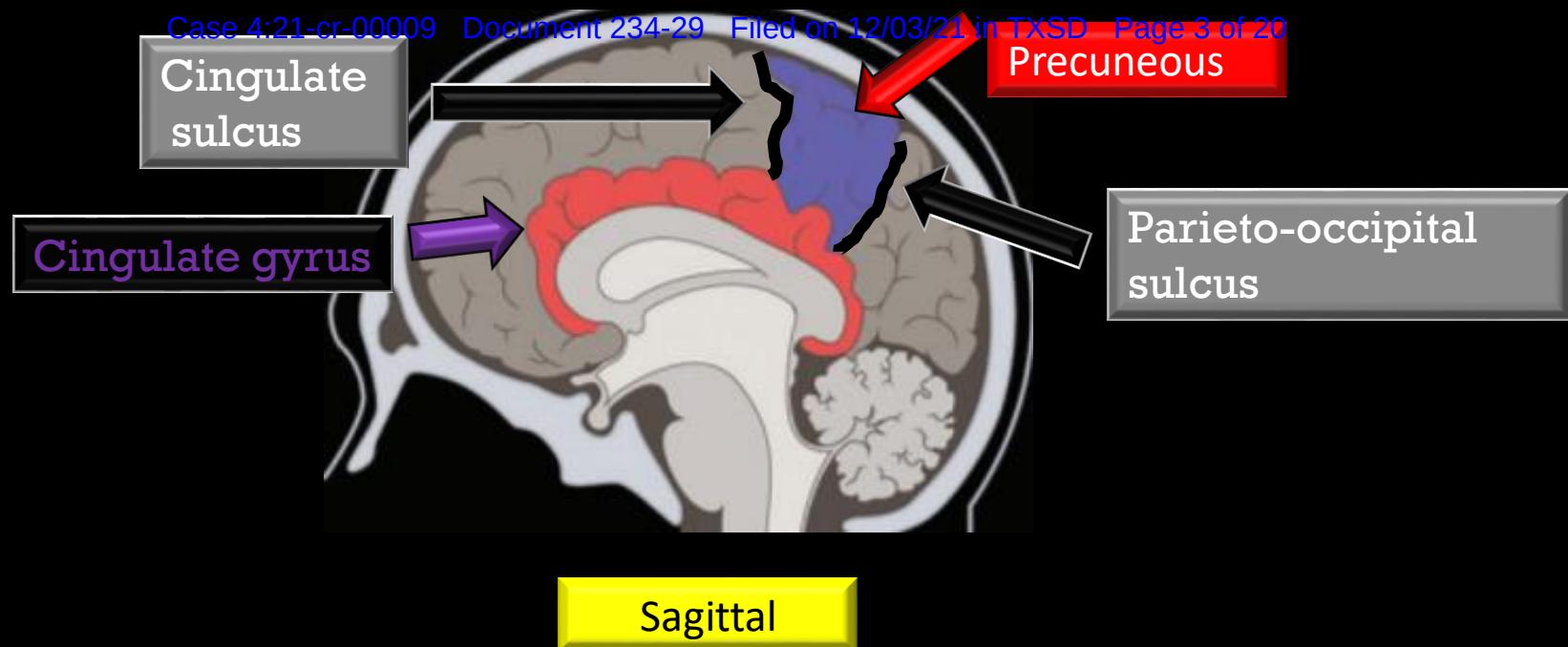
Residency Program Director

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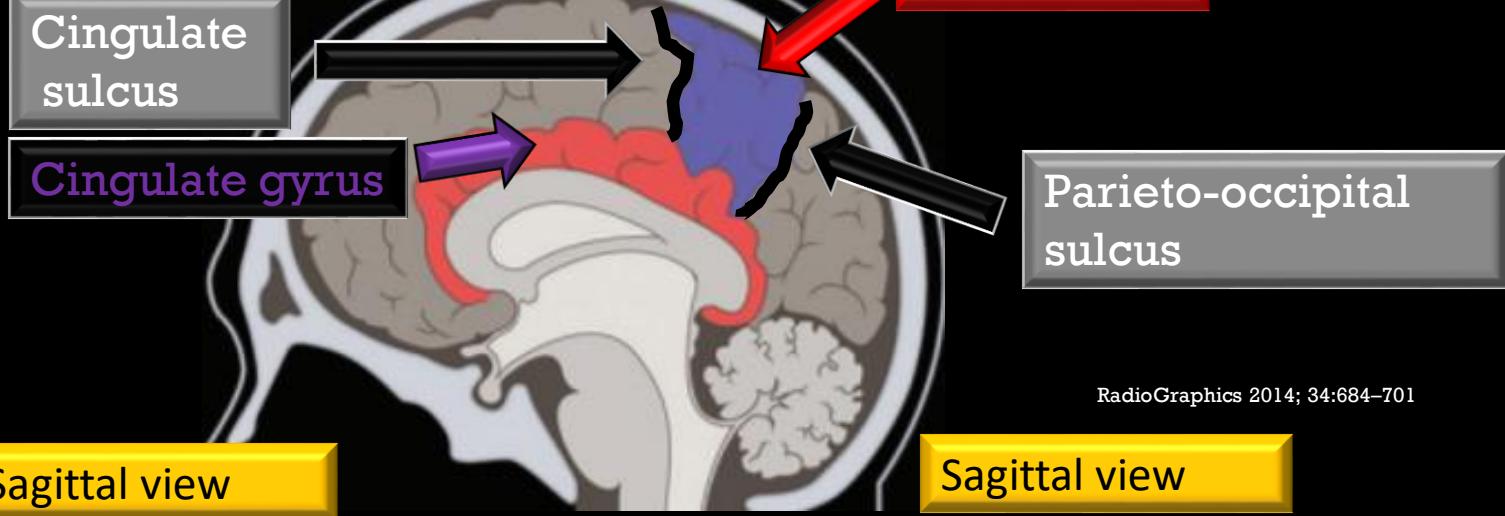
US v. Brockman
DX-34

Case No: 4:21-cr-0009

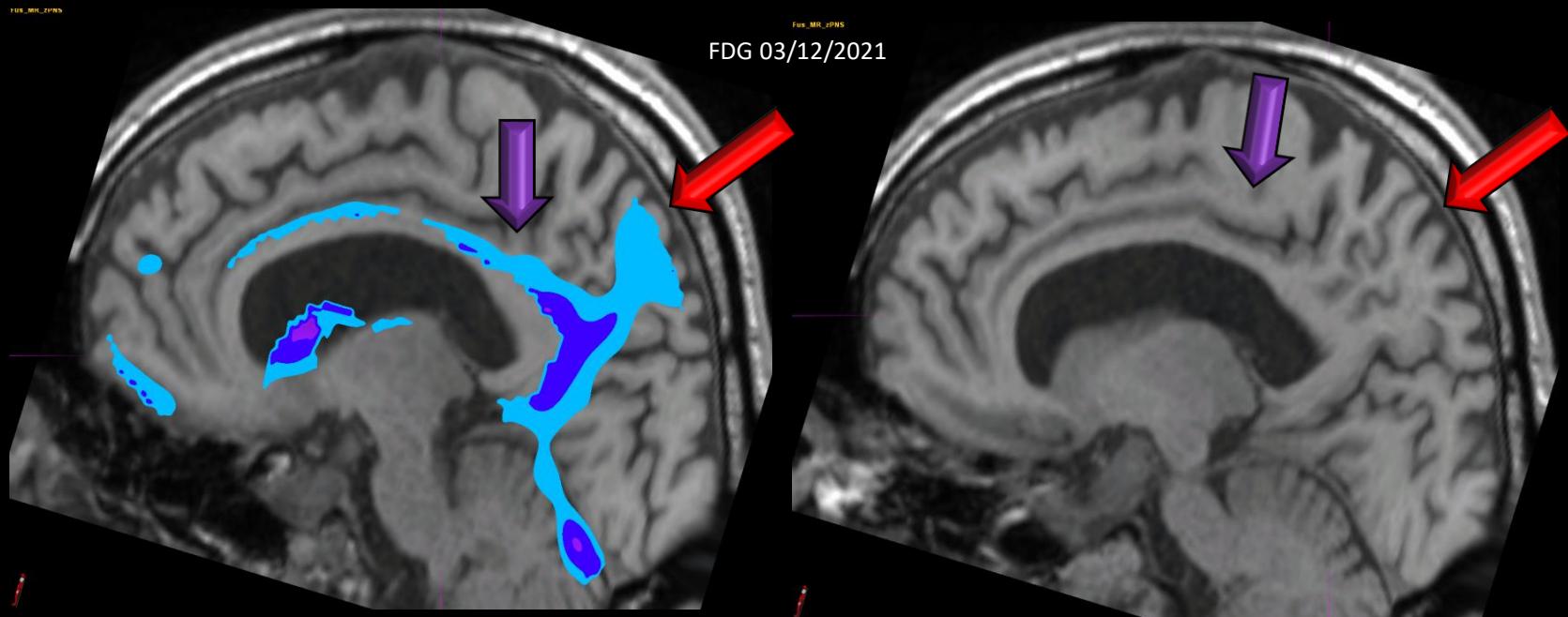
FDG-PET/CT
Scan date: 03/12/2021



- Two key structures to recognize are the **cingulate gyrus** and the overlying **precuneus cortex**, which are best appreciated on **sagittal images** of the medial hemispheres.
- The **cingulate gyrus**, located adjacent to the corpus callosum, is affected early in neurodegenerative disorders.
- The **precuneus** lies cephalad to the posterior cingulate gyrus and is bounded anteriorly by the cingulate marginal sulcus and posteriorly by the parieto-occipital sulcus



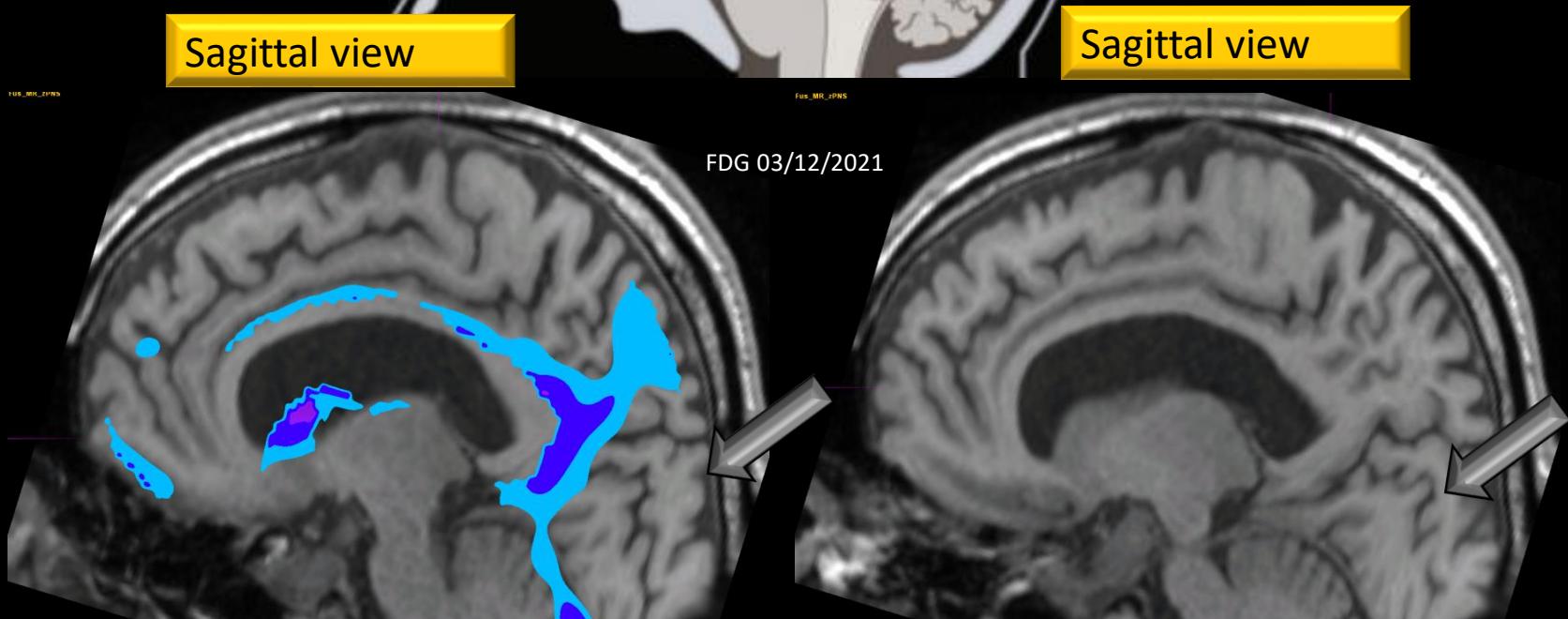
RadioGraphics 2014; 34:684-701



Blue = -2 SDs, purple = -3 SDs



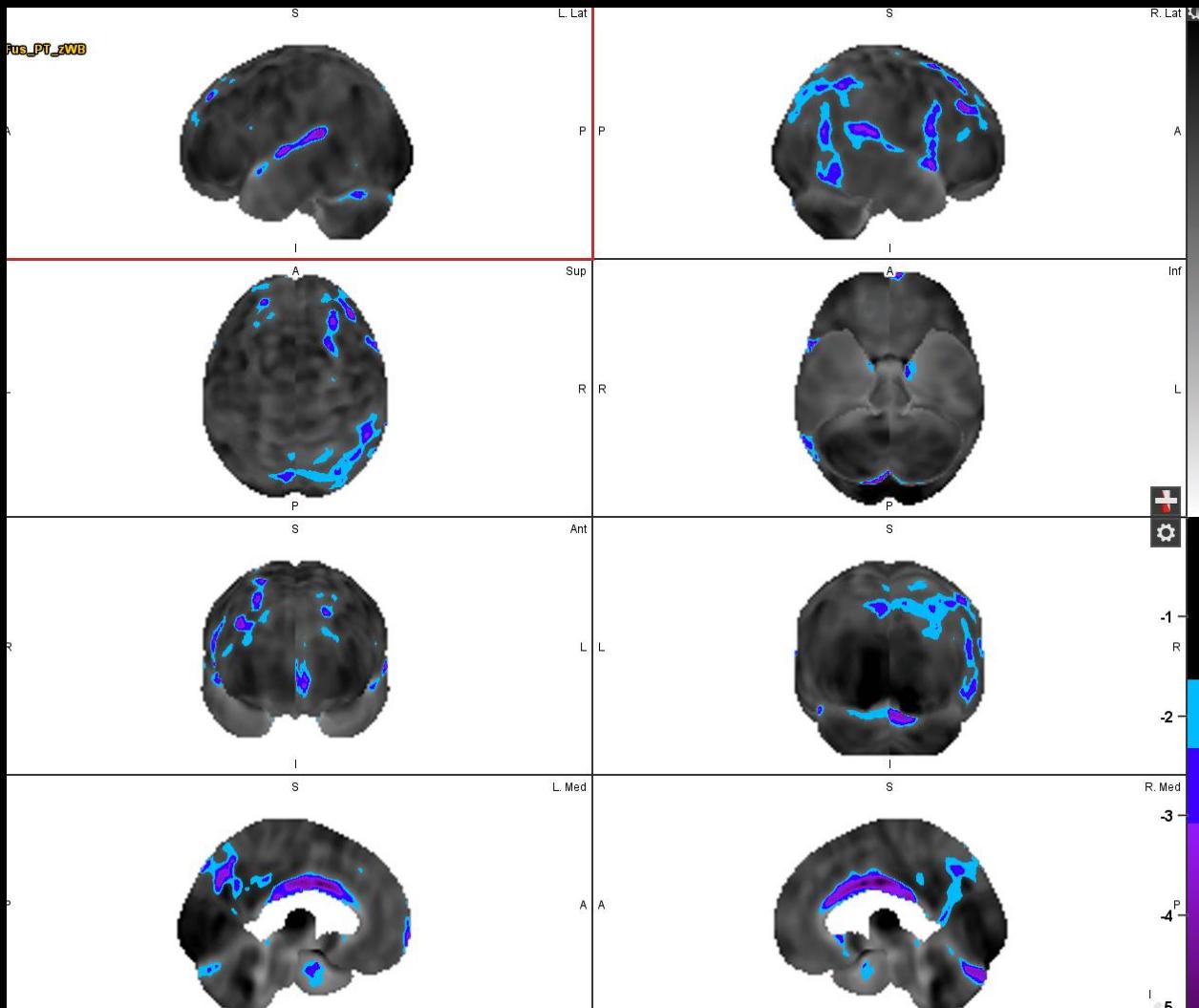
RadioGraphics 2014; 34:684-701



No hypometabolism in the occipital lobes was seen, including the primary visual cortex a finding associated with Dementia with Lewy bodies (DLB).

DLB is also associated with normal FDG uptake in the cingulate gyrus. This patient has decreased activity in the cingulate gyrus and precuneous, most consistent with early AD.

Voxel-based analysis results normalized to whole brain: 3D Stereotactic surface projection (SSP)

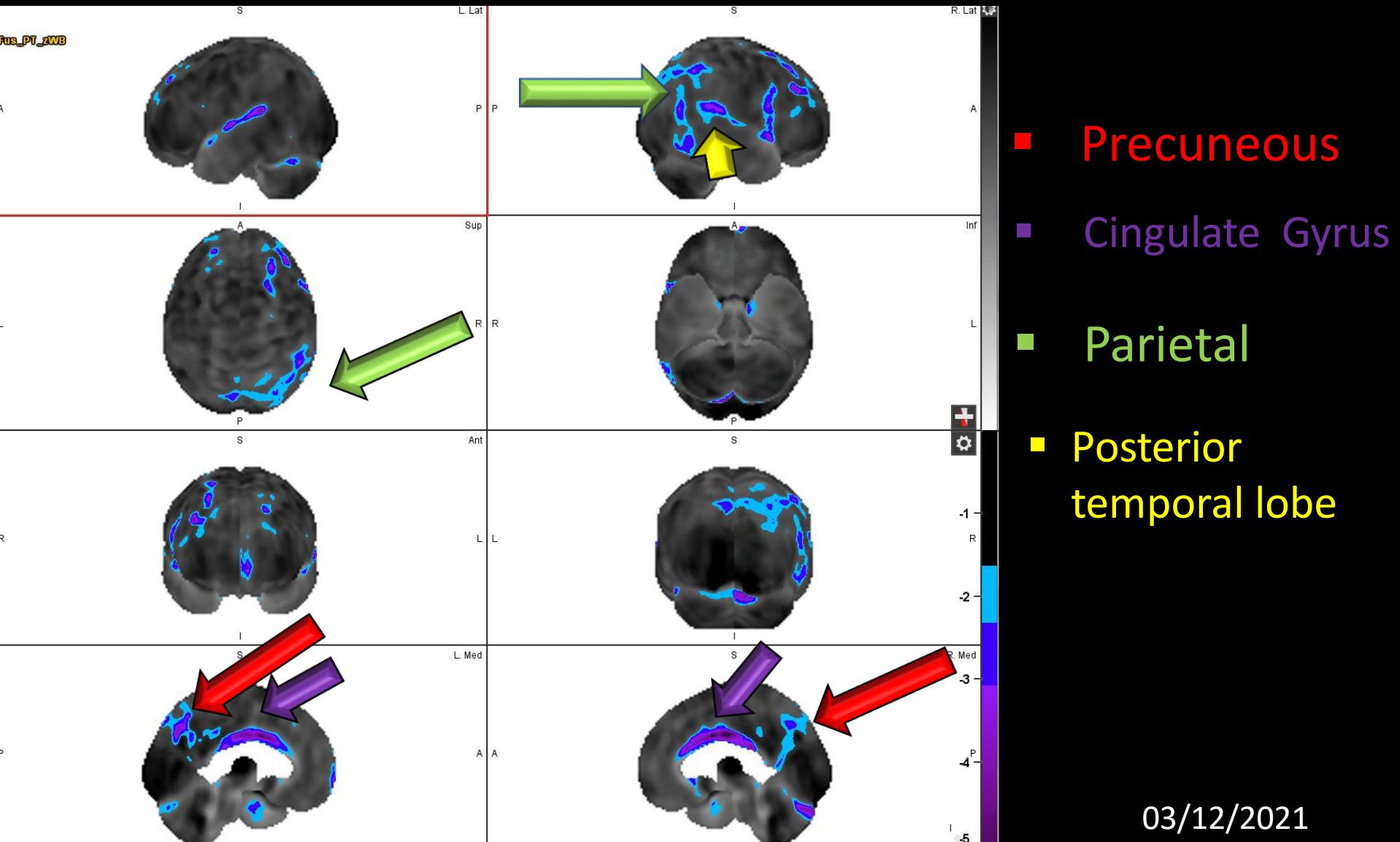


Colors scale means
decreased
metabolic activity

Blue = -2 SDs, purple = -3 SDs

03/12/2021

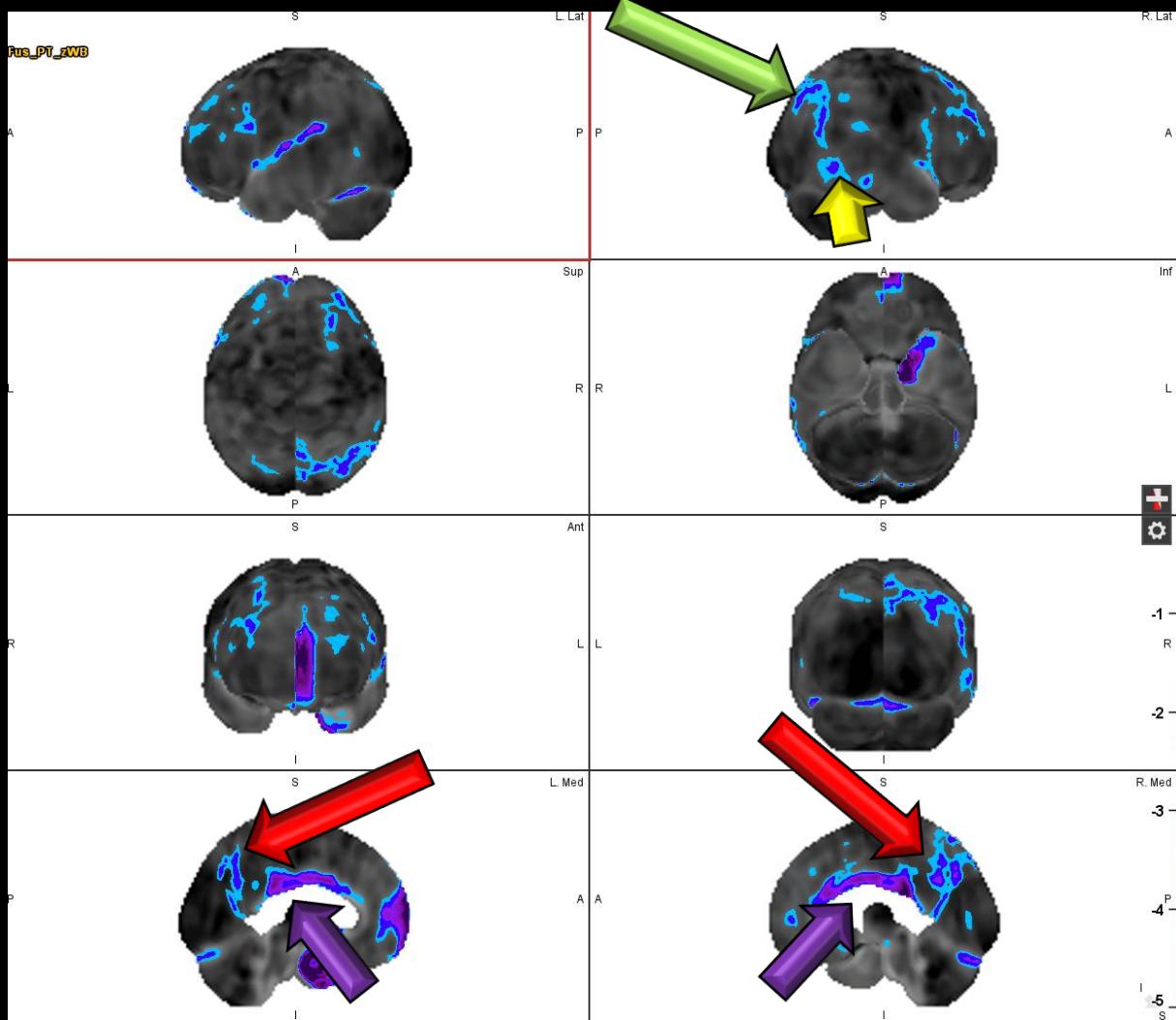
Voxel-based analysis results normalized to whole brain: 3D Stereotactic surface projection (SSP)



03/12/2021

FDG PET/CT
Scan date:8/24/2021

Voxel-based analysis results normalized to whole brain:
3D Stereotactic surface projection (SSP)



- Precuneous
- Cingulate Gyrus
- Parietal
- Posterior temporal

FDG 8/24/2021

Cingulate
sulcus

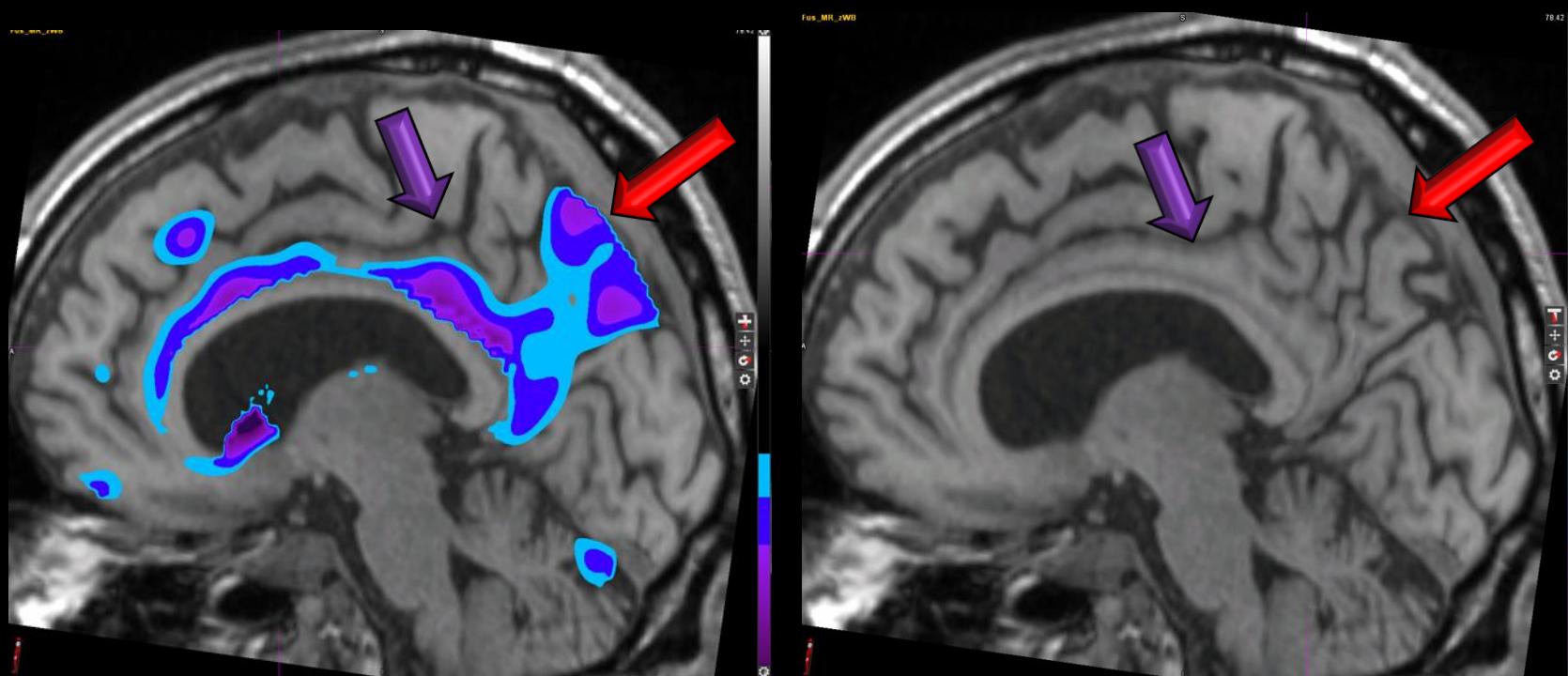
Cingulate gyrus

Parieto-occipital
sulcus

RadioGraphics 2014; 34:684-701

Sagittal view

Sagittal view



Blue = -2 SDs, purple = -3 SDs

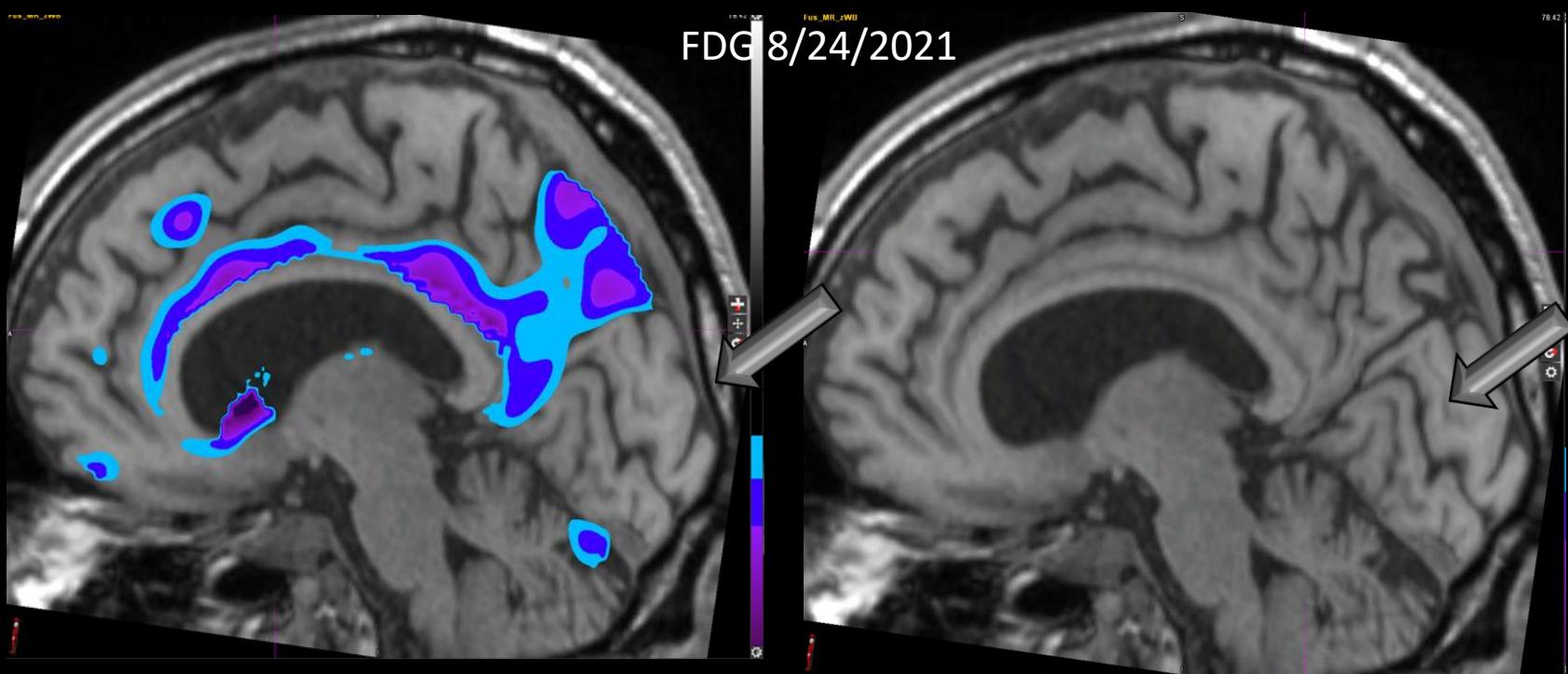
FDG 8/24/2021



RadioGraphics 2014; 34:684-701

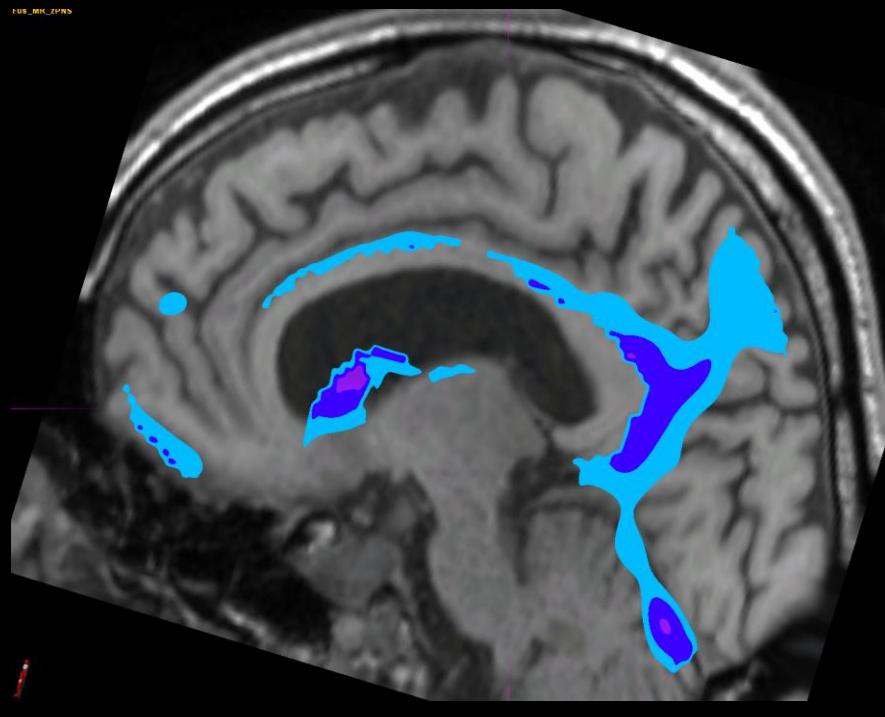
Sagittal view

Sagittal view

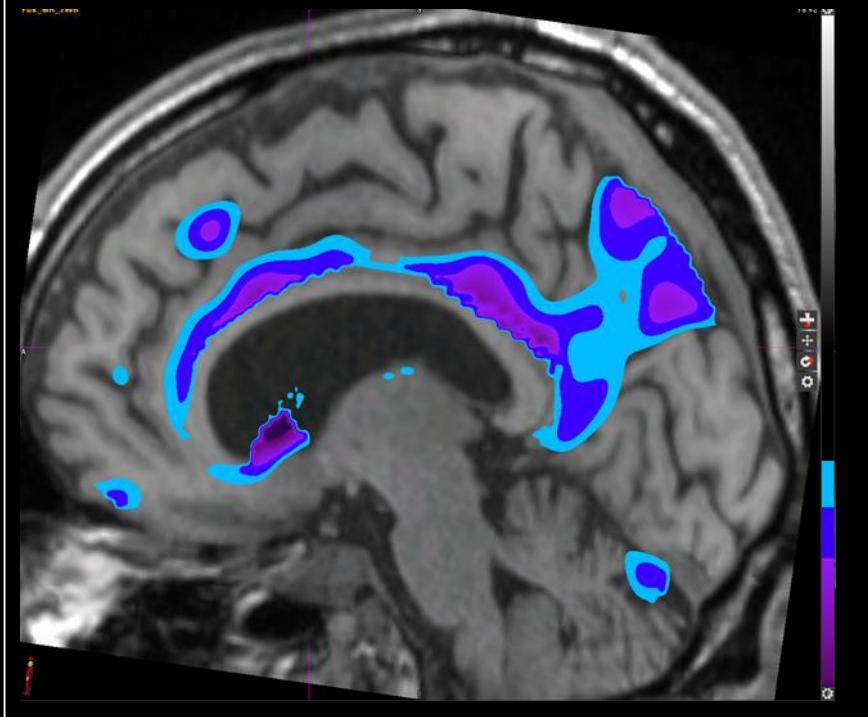


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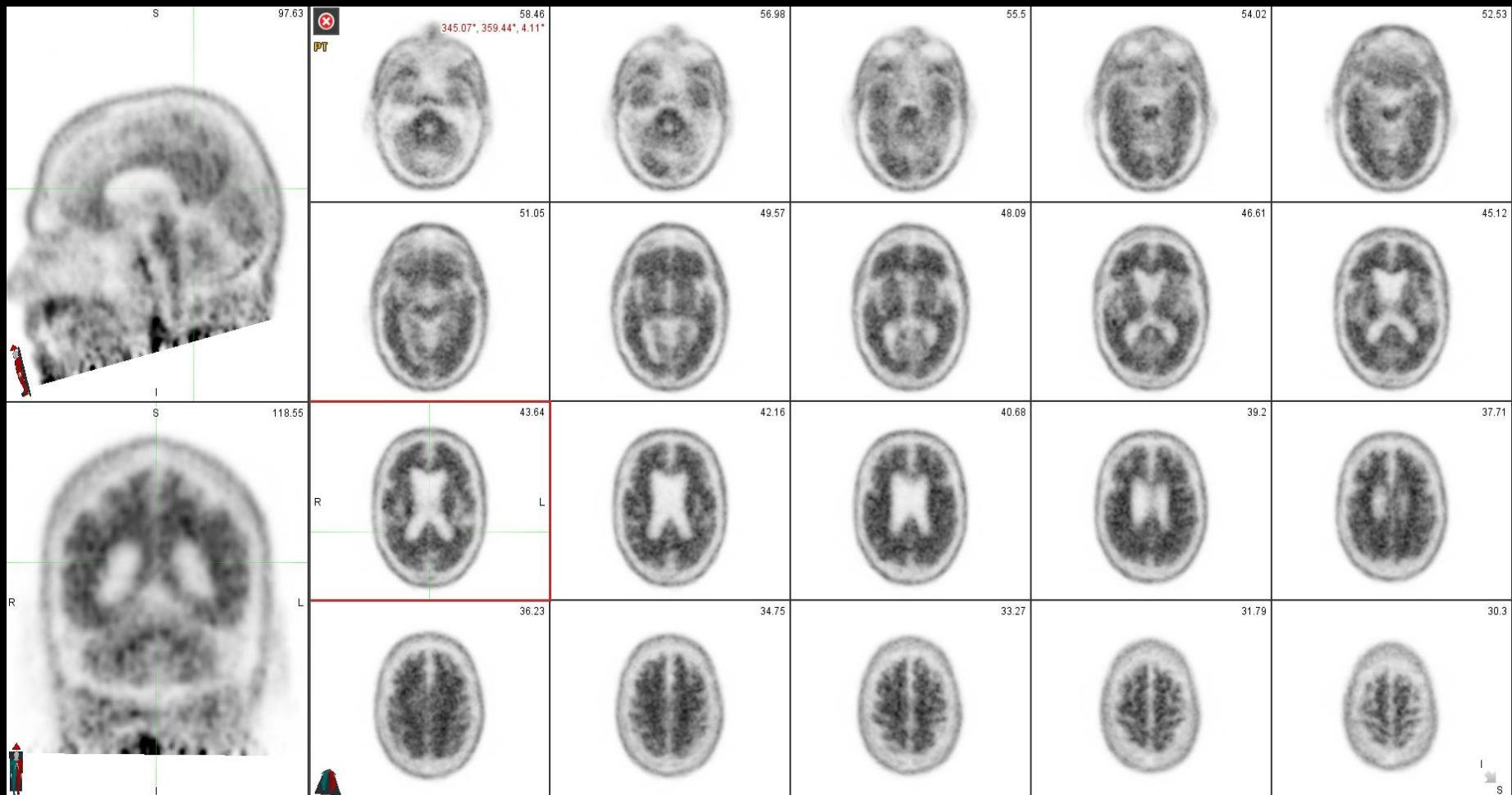
FDG 03/12/2021



FDG 8/24/2021

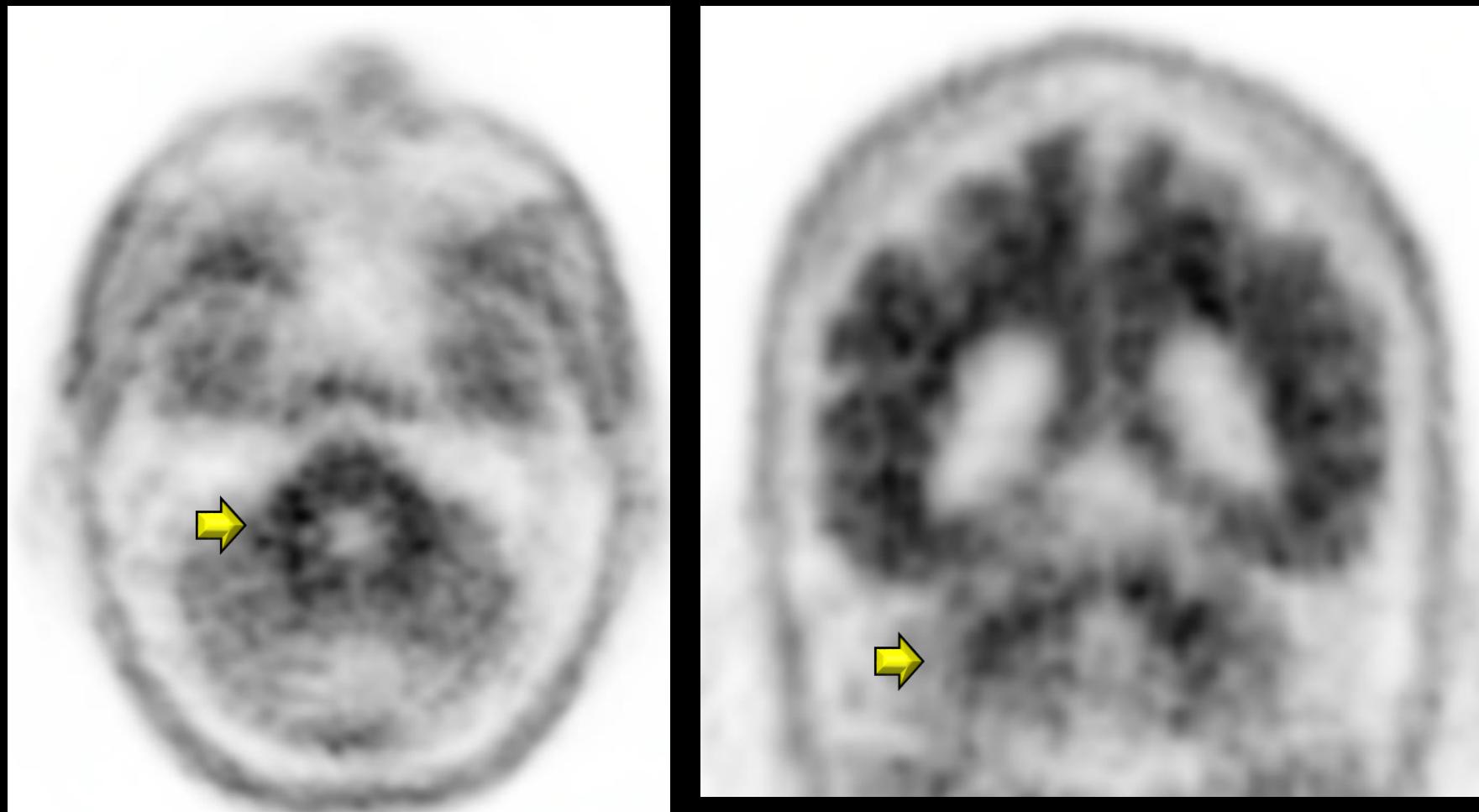


Brain amyloid PET/CT
(F-18 florbetapir, amyloid)
(07/28/2021)



Brain amyloid PET/CT

Brain amyloid PET/CT

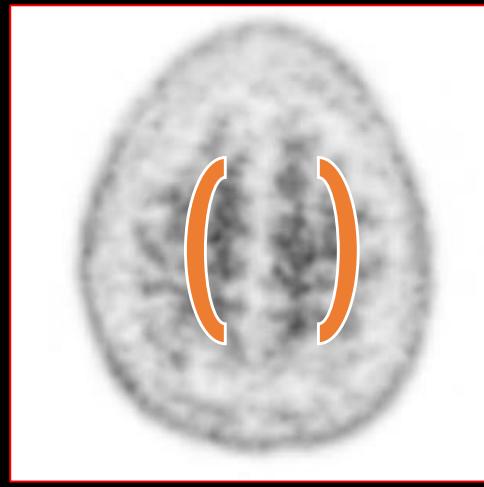


Normal cortical-white matter contrast in the **cerebellum** (reference region)

Example Case of β -amyloid negative PET assessment

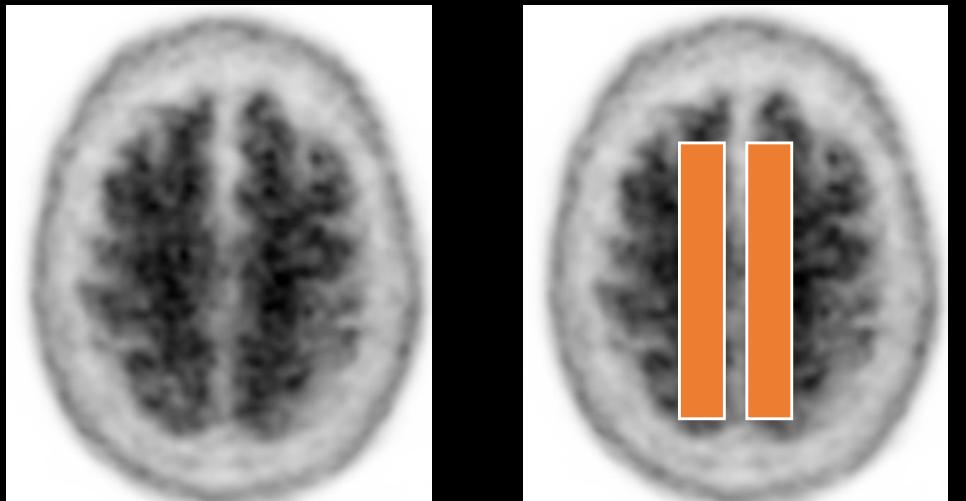
(NOT the evaluated patient):

β -amyloid negative PET assessment shows tracer binding in the white matter tracts with a “winter tree” configuration and convex configuration caused by tracer deposition in the white matter with an absence of uptake in the midline grey matter cerebral cortex



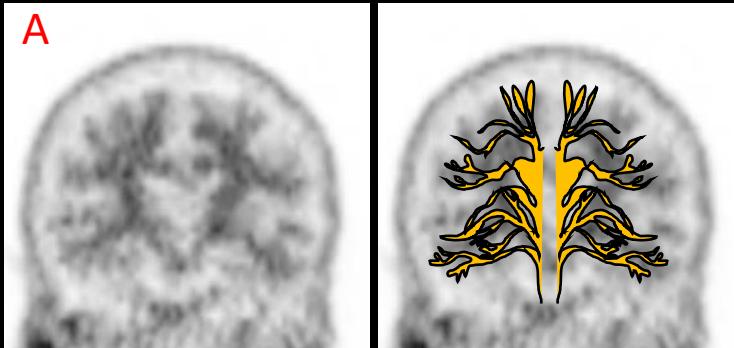
PATIENT: β -amyloid positive PET show tracer binding in the cerebral cortex gives a "summer tree" configuration.

Positive β -amyloid PET

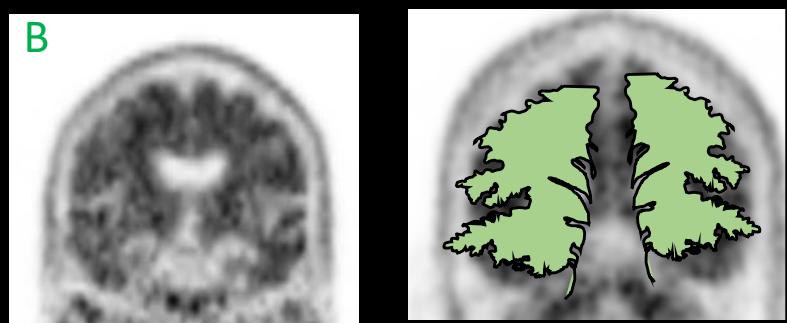


07/28/2021

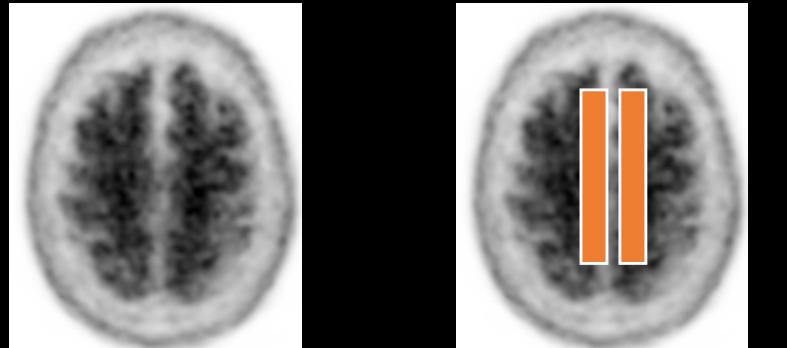
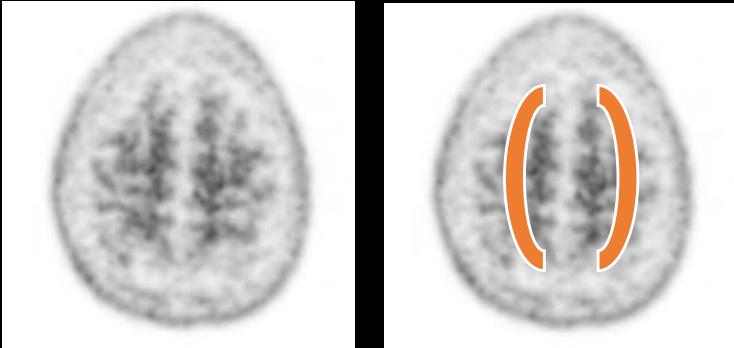
A. Example Case of β -amyloid negative: PET assessment shows tracer binding in the white matter tracts with a “winter tree” configuration and convex configuration caused by tracer deposition in the white matter with an absence of uptake in the midline grey matter cerebral cortex

A

Example Case of β -amyloid negative

B

Patient RB Positive β -amyloid PET

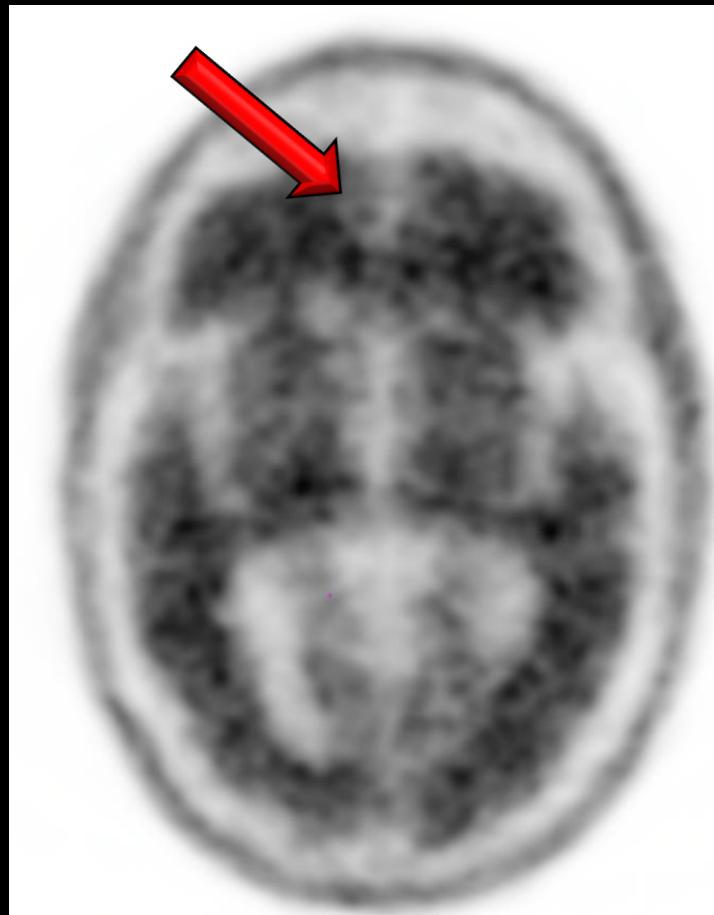


B. PATIENT RB: β -amyloid positive PET show tracer binding in the cerebral cortex gives a “summer tree” configuration.

07/28/2021

Brain amyloid PET/CT

“kissing hemisphere sign”

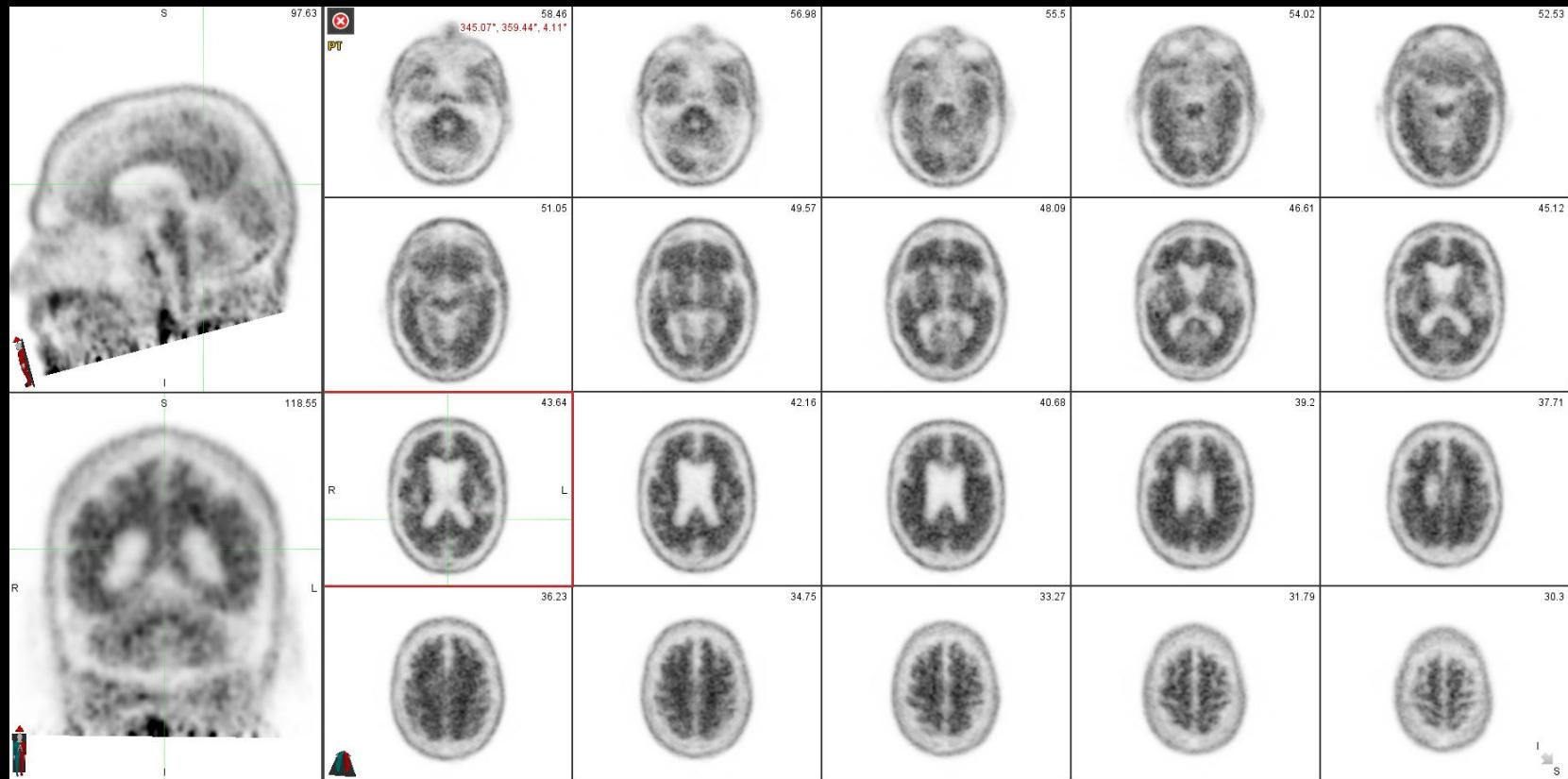


“temporal plain”



07/28/2021

Example Case of negative
amyloid



07/28/2021